

KOBUK

Health Clinic



Alaska Rural Primary Care Facility

Code and Condition Survey Report

REVISED
August 17, 2001



I. EXECUTIVE SUMMARY

Overview

The Kobuk Clinic was constructed in 1978 and is an older prototype clinic similar to many others in the Kotzebue region. It has been added onto already once, but unlike others in the region, the addition was built to the same width and in much the same manner as the existing building to give the appearance of a single structure. The building was elevated onto the current braced post and pad foundation following a recent flood. As with the other prototypes of this design, the entry vestibule is extremely tight and the area allocated to administration is very limited.

Renovation and Addition

The existing clinic is 1304 s.f. and would require an addition of 696 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. The floor plan layout would require the remodel of approximately 35% of the interior space. Additionally, the thermal enclosure of the building will require upgrades to meet current design standards. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 84% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. The community is anticipating a new clinic and has selected a site near the current community center and closer to the water treatment plant with access to a recently installed community sewer system. Most of the town is within the flood plain so the clinic will require an elevated foundation.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was conducted on May 24, 2001. John Crittenden, AIA, Architects Alaska and Bill Henriksen, PE, RSA Engineering completed the field inspection for this project. Mark Anderson of ANTHC and Jim Howell of Maniilaq Association were the team escorts. Mark reviewed alternative site locations with village leaders. Jim is an Environmental Health Specialist for the region and this trip accounted for one of his scheduled community visits. Both Mark and Jim knew the village contacts personally and made introductions and conducted the village briefings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the “Deep Look”, a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The Kobuk Community has a current population of 109 as published in the 2000 U.S. Census. It is located 128 air miles northeast of Kotzebue in the Kotzebue Recording District. It is a part of the NANA Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for additional information on the community.

B. General Clinic Information

The Kobuk Clinic was constructed in 1978 and is similar to other clinics in the region. This particular plan is a prototypical design replicated in at least four other villages surveyed. Some of these clinics have been remodeled and improved. This building is approximately 32' x 40' in size including a 32' x 16' addition and is constructed of conventional frame walls, floor, and roof. It has marginal insulation in the floors, walls and roof, particularly in the older portion. The flooring has recently been replaced and the interior walls have been recently painted.

C. Program Deficiency Narrative

There are two health care workers in the Kobuk Clinic. Although changes were made to the original floor plan in an effort to make the existing space more usable, the office area still has the feeling of being crowded. Some minor remodeling could accommodate the needs for office space while addressing the needs for a holding bed near and within sight of the work area. This is a real concern, particularly when addressing the needs of juveniles.

The following table illustrates a comparison between the current actual square footage (SF) and the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Medium Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Medium	Difference
Arctic Entry	1	20	2	2 @ 50=100	80
Wait/Recep/Closet	1	103	1	150	47
Trauma/Telemed/Exam	1	104	1	200	96
Office/Exam	2	121	1	150	29
Admin./Records	2	274	1	110	-164
Pharmacy/Lab	-	-	1	80	80
Portable X-ray	-	-	-	-	-
Spec. Clinic/Health Ed./Conf.	-	-	1	150	150
Patient Holding/Sleep Room		55	1	80	25
Storage	1	70	1	100	30
HC toilet	1	36	2	2 @ 60=120	84
Janitorial Closet	-	-	1	30	30
Total Net Area				1270	
Mechanical Room		120		147	27
Morgue/Ancillary	1	120		30	-90

The Kobuk Clinic has a current gross area of 1304 s.f. This would require a gross building area expansion of approximately 696 s.f. to meet the 2000 s.f. minimum ARPCF requirement for a Medium clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries:** The front door has an arctic entry which is nominally 4' x 5'. This is inadequate to accommodate a stretcher. The back door opens directly to a stair landing currently without handrails. A ramp is proposed for this door to allow easier stretcher access.
- **Waiting:** A small waiting area for about 6-8 persons is well located to maintain control of the clinic area from the public. It is directly opposite the receptionist station.
- **Trauma/Telemed/Exam:** The trauma/exam room measures 8' x 13'. It is not wide enough for the needs of trauma response procedures. The telexed equipment requires

significant space in this small room. In the event of a trauma the open storage area would be used.

- **Office/Exam:** The older exam room is used as both an office and exam room. In the addition, one of the two exam spaces is used for trauma (see above) and the other is only used for exam. This provides several options for patient care on a day-to-day basis.
- **Administration/Records:** The administration area is severely limited because the health care staff wants to keep the observation bed near the work area. This arrangement needs to be carefully considered in a remodel. In order to use the available space better to accommodate both staff workspace needs and patient observation.
- **Pharmacy/Lab:** All lab procedures occur within the exam rooms. This spreads the lab equipment and medical supplies out and limits the ability to control inventory. A locked storage room in the back of the clinic near the main exam rooms keeps secure inventory.
- **Specialty Clinics:** Specialty clinics require the use of current exam space.
- **Patient Holding/Sleep:** A small patient holding niche is provided near the receptionist.
- **Storage:** Most medical supplies and medivac supplies are stored in an open area in the addition. This storage is fairly well arranged, however, it can restrict access into the clinic as the back door opens directly into this space. There is an additional storage room which contains most controlled products.
- **HC Toilet Room:** The toilet room is undersized for handicapped access.
- **Janitor Closet:** The mechanical room has been relocated and enlarged in a recent remodel. It is of adequate size, however, it is better to separate the janitor closet. The walls of this space are unfinished and have exposed framing.
- **Ancillary Spaces:** There is a kitchen/break room in the front of the clinic accessible to the public that contains a sink and refrigerator.

D. Architectural/Structural Condition

The building structure is relatively intact, considering its age. To adequately address the thermal requirements of a building in this climate, given the extreme cold and high cost of fuel, the roof, walls and floor should have additional insulation. This project would consist of essentially wrapping the building in rigid foam and applying new siding, roofing and soffit materials. 3” rigid insulation over the existing roof would be adequate, replacing the metal roofing in the process. The walls should be furred with 1.5” rigid insulation, ice and water shield, and new siding. The floor should be reinsulated with 3.5” foam panels fit between the

beams and placed with sealant and joint trim. The floor requires new subfloor and sheet flooring to smooth over the irregularities that cause chipping and deterioration.

The interior walls in the older portion should be extended to the ceiling and a 2x4 T-Bar acoustical ceiling installed with new lighting. Exterior ramps require replacing due to poor initial construction and non-compliance with ADA guidelines. Additionally, the interior casework is very modest and should be supplemented with some custom countertops and workstations. Much of the furniture should be replaced to provide good functional workstations and efficient file and medical supplies storage.

E. Site Considerations

The existing clinic is located near the school on a side street not far from the bank of the Kobuk River. Its foundations appear to be in a low spot, requiring the recent lifting of the building to raise it above flood levels. The site is not ideal for a clinic as it is not near any other community buildings other than the school. The community has selected a site which is located near community water, sewer and power. It appears that post and pad foundations are working well for the existing buildings. However, since the site is subject to flooding, a triodetic foundation might be appropriate, if nothing else than to keep the building up above flood level.

Site utilities include village water, sewer, power, and telephone service directly to the building.

F. Mechanical Condition

Heating and Fuel Oil: A Williamson Temp-O-Matic furnace had provided Heating in the older section of the clinic, but the furnace was out of commission, so the clinic was relying on a Toyostove located in the waiting area. The furnace should be replaced and when it is, the code deficiencies identified in the Deficiency Evaluation and Cost Assessment forms can be addressed. A second Toyostove serves the heating needs of the clinic addition. It is located in the common area of the addition. Fuel oil is provided from the Village fuel farm to a day tank in the furnace room. The day tank serves the furnace and the Toyostove located in the waiting area of the clinic. The piping from the village fuel pipeline to the day tank is single wall schedule 40 black welded steel and is not well supported from the building. The day tank is a UL listed system with its own pump, venting and safety controls to prevent it from overfilling. Appropriate oil safety valves, shutoff valves and a filter in included in the system. A 55-gallon unlisted fuel tank serves the Toyostove located in the new addition to the building. It needs to be replaced with a UL listed tank with new supports and piping that is properly supported from the structure.

Ventilation: There is no ventilation serving the building except for an exhaust fan in the restroom. The restroom exhaust fan is a pull chain style fan that mounts directly in the outside wall. It was operable but is not an appropriate fan to serve in the type of climate it has been installed. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone.

Plumbing: Cold water is provided into the clinic from the village water supply and hot water is generated from an electric water heater. The waste pipe for the building is a 4" line that flows by gravity to the village sewer system. Plumbing fixtures in the clinic include a toilet, lavatory and bathtub/shower combination in the restroom and a single compartment sink in exam room #1. The fixtures in the restroom do not meet ADA requirements. The lavatory in the restroom is fitted with hose threads for filling the mop bucket, but is not equipped with a vacuum breaker or back-flow device, which are required by code to help prevent cross contamination of the domestic water system.

G. Electrical Condition

Power: 120/240-volt single-phase power is provided to the clinic's electrical meter from an overhead service. The main breaker at the meter is 100-amps and serves the 125-amp building panel. A grounding wire extends from the meter down along the side of the building to a grounding rod. The electrical panel has room for 24 breakers, 15 breakers were installed and there were no spares. All wiring from the panel has been done in Romex. All conductors are copper. The panel appeared to be properly grounded. Clearance in front of the panel has been infringed upon by an electronics' rack. The numbers of receptacles inside the building are appropriate, no plug strips were observed. Receptacles near the restroom and exam room sinks are not GFI protected. There was one weatherproof receptacles located on the outside of the building near the electrical service entrance. It was also not GFCI protected.

Lighting and Emergency Fixtures: florescent fixtures throughout the building provide interior lighting. All fixtures use four 4-ft. 35 watt 40F lamps. Fixtures in the oldest section of the building were four lamp fixtures recessed into the suspended ceiling. The newer section of the building has two and four-lamp surface mounted fixtures. All fixtures are in good shape. The lighting levels in the building appeared acceptable and were reported to be satisfactory. Exterior lighting was provided with an incandescent fixture at the front entrance only that was in poor condition. The fixture at the front of the building should be replaced and fixtures added at the back of the building. There are no emergency light fixtures in the building. Each exit had a metal exit sign located over the doorway. They should be replaced with lit exit fixtures. There are battery type smoke detectors in the waiting room and the back office area. Additional coverage should be added.

Telecommunications: Three phone lines serve the building, one for the local incoming line, one for a fax line and a dedicated line for communication with the Kotzebue Hospital. A Telemed system was also recently installed.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

- 02 Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.
- 03 Safety:** These deficiencies identify miscellaneous safety issues.
- 04 Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.
- 05 Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans.
- 07 Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.
- 08 Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.
- 11 Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.
- 12 Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.
- 13 Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.
- 14 Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS - KOBUK

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Kobuk is projected to be:**

Base Anchorage Cost per s.f.	\$183/ s.f.
Medical Equipment Costs @ 17%	\$31
Design Services 10%	\$18
Construction Contingency 10%	\$18
Construction Administration. 8%	\$15
Sub-total	\$265/ s.f.
Area Cost Factor for Kobuk 1.52*	
Adjusted Cost per s.f.	\$404/ s.f.

Total Project Cost of NEW BUILDING 2,000 x \$404 = \$808,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)	
90% of cost of code/condition improvement**	\$155,679 Renovation
Projected cost of remodeling work (See A08)	
1,304 s.f. clinic @ 35% remodel = 457 s.f.	\$56,315 Remodel
Projected cost of building addition (See A09)	
2,000 s.f. – 1,304 s.f. = 696 s.f.	\$318,184 Addition
<input type="checkbox"/> Design 10%, Const. Contingency 10%, Const. Admin. 8%	\$148,450

Total Project Cost of REMODEL ADDITION \$678,628

- **Ratio of remodel:new is \$678,628 : \$808,000 = 0.84X**

The cost of a remodel/addition for this clinic would cost 84% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Kobuk.

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